

**Before the
Federal Communications Commission
Washington, D.C. 20554**

In the Matter of)	
)	
Wireless Bureau and OET Seek Comment)	DA 12-209
On Progeny's M-LMS Field Testing Report)	WT Docket No 11-49

To: Office of the Secretary
Attn: Chief, Wireless Telecommunications Bureau
Attn: Chief, Office of Engineering and Technology

Comments on the Progeny Test Report
And Request to Extend the Deadline for Replies to Comments

The undersigned entities (“SkyTel”)¹ hereby timely comment on the Progeny test and test report (“Test” and “Test Report”) referenced in DA 12-209, on invitation by the Chiefs of the WTB and OET.

Initially, SkyTel references and incorporates herein their Request to the FCC to extend the Comments and Reply Comments deadlines, and their Reply to the Opposition of Progeny to that Request. That Request was denied by the FCC. DA-12-400A1. For reasons given in said Request and Reply, SkyTel believes strongly and hereby re-asserts that the denial results in an insufficient period of time for Comments and Replies. While these SkyTel Comments clearly demonstrate why the Test and Test Report are defective and should be rejected, nevertheless, grant of the Request in full or part would have permitted a further, more complete record—including from any parties on any side of the underlying issues, and at minimum ample time for Replies.²

Accordingly, SkyTel hereby asked for an extension of the Reply deadline consistent with its

¹ Note, V2G LLC, a company managed by Warren Havens, does not at this time join in these Comments. It may, however, Reply to these Comments and other Comments.

² The basis of the Progeny Opposition and FCC denial of the Request avoided the central issue: what is in the *public* interest in creating a sound record on this matter, as opposed to whether SkyTel's interests were timely expressed in the Request or otherwise served by the Request.

extension Request, in full or part. That cannot be deemed untimely, especially given that SkyTel has complied fully with the non-extended Comments deadline and contributed to the Bureaus Comments precisely as called for. Further, as shown in these Comments including the attached technical review (“Tech Review”), there are indeed major problems and issues with the Progeny Test and Test Report, and as stated in the extension Request and Reply, this warrants the time extension in the Request including for Replies.

Attached Technical Review

Attached hereto (separately uploaded on ECFS) as the “[Attachment](#)” is a technical review by Nishith D. Tripathi, Ph. D. (“Technical Review”). This is referenced and incorporated in full herein as Comments of SkyTel. The report is the work product and opinion of Dr. Tripathi. The remaining Comments of SkyTel herein are in accord with and complement this Attached review. If there are any apparent conflicts between the text of this pleading and the Attachment hereto, that is inadvertent and will be addressed in a one or more Reply Comments.

Failures of Test Purpose and Purpose Requirements

The purpose and essential requirements of the Progeny test is set forth by the FCC in the Order granting to Progeny several rule waivers, DA 11-2036, ¶ 25, as follows (emphasis and numbers in brackets added):

...Included in these rules is the obligation, set forth in Section 90.353(d), that Progeny demonstrate through actual field tests that its M-LMS system will not cause unacceptable levels of interference to Part 15 devices.⁸⁵ As the Commission noted, the purpose of the testing condition “is to insure that multilateration LMS licensees, when designing and constructing their systems, take into consideration a goal of minimizing interference [1] to existing deployments or systems of Part 15 devices in their area, and [2] to verify through cooperative testing that this goal has been served.”⁸⁶

85. 47 C.F.R. § 90.353(d).

86. LMS MO&O, 12 FCC Rcd at 13968 ¶ 69.

However, the Progeny test as showed in the Test Report did not meet this purpose since it did not do either of the two underlined requirements that the FCC instructed.

Failure to Test all of the Spectrum and the Uses of the Other 4 MHz

Progeny uses only 4 of its 8 MHz³ for the Test, which is only of the location component. It does not state and did not test with regard to its planed use of the other 4 MHz. The Test requirement and underlying rule and Orders (cited above), however, is with regard to the overall M-LMS tech and system—not one portion. Unless Progeny means to give back the other 4 MHz, the Test is incomplete and defective. (The spectrum must be used or given back: is cannot be warehoused.)

Failure to Test In Relation to Other M-LMS and Other Non-Part 15 Uses

The Test assumes that there is no other licensed use in 902-928 MHz (other M-LMS, N-LMS, and Government, and no ISM unintentional radiator devices, but that is defective, including since Part 15 devices (for the most part) do not operate in all of 902-928 MHz, and if substantial other parts of the band is used for licensed purposes, then the Part 15 device will not, as in the Progeny test, stay off (with intrinsic automatic arrangements, in sensing the radio environment) of the Progeny spectrum, since the other spectrum will be in use as well. The Part 15 devices will then use far more of the Progeny spectrum than in its test. That is, of course said Part 15 devices will not be much subject to interference by any M-LMS devices that occupy only a minor subpart of 902-928 MHz if the majority of that range is not yet in use by other M-LMS, government N-LMS and other non-Part 15 devices. Progeny made no attempt to find out from said other users how they will use the majority of the spectrum, and attempt to factor that in its Test (however, for reasons herein, that would no cure the other defects).

This also means that there is no accurate results of the Progeny location system in the Test: its performance will be affected by the Part 15 device systems use of the same spectrum, and as noted above, that use will increase once the other M-LMS, and N-LMS is in use. What may then

³ Progeny holds licenses for the B and C blocks of M-LMS. Together, these are 8 MHz.

occur, logically, is that Progeny would increase its average power in the field and/or duty cycle to compensate. None of this is considered or simulated in the Test.

Part 15 technology and devices have a valuable role, including in the future of ITS wireless. SkyTel has in its pleadings in NRPR 06-49 commented on this, and how the Commission recognized that M-LMS transmitters will generally be spatially separated from systems of part 15 devices and individual devices.

Devices of M-LMS networks properly focused on ITS locations and applications can include Part 15 mode, so that when users get out of their vehicles, they can use Part 15 mode to access base stations in homes, offices, businesses, etc. This will, in turn, be a basis of active cooperation between M-LMS operators and Part 15 tech, equipment, and system companies. *There will be mutual economic incentives to cooperate and make maximum, spectrum-efficient use of the shared band. This is in accord with the Commissions Spectrum Task Force Report issued in the last decade.*

Location Tech and System Are Not Designed for Real Use

The duty cycle and bit rate is so low, that the location system will not work well- it will not be viable. The reported accuracy is not an improvement, as noted next. The update rate is not sufficient for high accuracy location, especially in moving vehicles, needed (among other things) to surpass other existing (including wide-area terrestrial Network RTK, and satellite-based GNSS augmentation especially if GPS and other GNSS signals are employed) and upcoming location systems being deployed worldwide, and that are proven, standards based, and some of which will be at no cost (or no additional cost). See [Exhibits 1 and 2](#) to these Comments (separately uploaded on ECFS).

Also, the reported accuracy is less than that will be the built-in location of LTE the upcoming standard for CMRS, which Progeny asserts its end-user devices will use. If those devices have LTE and LTE has built in location better than what Progeny believes (even if correct, but that

was not proven in the Test), then the Progeny location system has not value, or little value (not even considering N-RTK, space-based GNSS augmentation, Internal Navigation Systems which will be in vehicle and even smart phone increasingly and cost effectively, etc.).

Why is Progeny doing this if it will not be viable in the market? It appears to be a throw away, or token, system as to the location, in order to get the other waiver granted-- to not have to serve vehicles on primary basis. What Progeny will or certainly may then do is (1) use the other 4 MHz-- see above, and even use the unused amount of the 4 MHz allocated for the location system (since it is broadcast only, and only 20% duty cycle) for intensive use of two-way *commercial* communications in the middle of areas of high Part 15 systems use.

That would constitute misrepresentation in the waiver request, and also failure of the Test since the Test requirement is not limited to the location component of M-LMS systems. SkyTel, on the other hand, have repeatedly advocated before the FCC and others (and will be presenting these matters substantially to members of Congress with new representatives we retained in Washington DC for this purpose) to keep all M-LMS for Intelligent Transportation Systems, *and keep the rule that requires primary service to vehicle*-- this will create time and space separation from most Part 15 use, since the most highways corridor use and its peak hour traffic, is spatially and temporally separated from most Part 15 uses.)

There *is* value for terrestrial multilateration radio location, among the other high-accuracy location methods and systems indicated above. SkyTel does not address that here. It is beyond the scope of these Comments, but SkyTel has otherwise discussed this in filings with the FCC and publications on Scribd.

Defective Scope

The extremely narrow scope of the tests prevents the applicability of their results to a nationwide Progeny network. The limited set of selected Part 15 devices, the lack of the participation from and existence of Part 15 systems in the tests, lack of consideration of the

amount of peak traffic generated by individual Part 15 devices and Part 15 systems, and the limited number of test cases (e.g., focus on stationary environment only) are example factors that restrict the applicability of the test results. This is discussed in the Attached Technical Review.

Failure to

Defect for Lack of Testing in Vehicles

The Progeny waivers sought and granted included that Progeny need not primarily serve vehicles, but may co-equally serve vehicles and other things being located and served. However, this grant did not allow to not serve vehicles at least co-equally. The Test did not test in vehicles what to speak of moving vehicles, a far more difficult radio environment than a device used outside vehicles that is stationary or moving more slowly.

This is a not only a glaring, fatal defect in the Test, but reveals that Progeny does not actually intend to comply with the granted waivers.

As noted above, the location tech and systems appear to be token, a *Trojan Horse* to get the FCC to allow it to not use the spectrum for any real location (none that will be viable and used in the market) and to then use the 4 MHz not used for the location, and the 80% of the 4 MHz used for the Location apart from the 20% employed in the 20% duty cycle)—i.e., 7.2/8 or 90% of the spectrum⁴—for non-vehicular commercial radio communications, that may very well be right in the middle of the areas and times most used by Part 15 devices.

While these Comments are not directed to the “Disqualification Issue” which the FCC reserved for a future determination (noting that its licensing decisions as to Progeny are without prejudice to the case SkyTel presented to the FCC on this issue), this apparent Trojan Horse attempt is consistent with the Progeny actions shown in the Disqualification Issue. Both should be rejected.

⁴ Above that percentage considering that the noted non-location radio-communication function will be in system architectures with more densely spaced base stations (or “cell sites”) than the few location beacons employed in a given wide area.

Other

The subject headings above do not limit the actual content of this pleading and its appended materials. In total, many additional issues are presented.

Conclusion

For reasons in the extension Request and further showed above, the Test and the Test Report fail to meet the FCC's stated Purpose and Requirements, and otherwise are defective for reasons noted herein and the accompanying expert report commissioned by SkyTel. Thus, the waiver grant condition based on meeting the Test requirements was not satisfied.

Further, no Test of only one element (radio location: the other being radio communications) or in only half of the Progeny spectrum can meet said Purpose and Requirements, unless Progeny turns in the other 4 MHz for cancellation, and accepts a license condition to use only its proposed location technology on the other 4 MHz. If this is done, the unused and cancelled spectrum can be used for the LMS purpose, Intelligent Transportation Systems on said systems' corridors and facilities, and by Part 15 devices and systems as well (which are spatially and temporally diverse from ITS, in large part).

The waiver request, Test and Test Report are a Trojan Horse by appearances, substance and details. Progeny should not be permitted another Trojan Horse, as it utilized to get the licenses in the first place (see discussion of the Disqualification Issue in preceding SkyTel pleadings in this docket).

In addition, the request above for extending the time for Replies should be granted for the good causes show—in the public interest.

[Execution on next page.]

Respectfully submitted, March 15, 2012,

Skybridge Spectrum Foundation, by
[\[Filed electronically. Signature on file.\]](#)
Warren Havens, President

Telesaurus Holdings GB LLC, by
[\[Filed electronically. Signature on file.\]](#)
Warren Havens, President

Environmentel LLC (formerly known as AMTS Consortium LLC), by
[\[Filed electronically. Signature on file.\]](#)
Warren Havens, President

Verde Systems LLC (formerly known as Telesaurus VPC LLC), by
[\[Filed electronically. Signature on file.\]](#)
Warren Havens, President

Intelligent Transportation & Monitoring Wireless LLC, by
[\[Filed electronically. Signature on file.\]](#)
Warren Havens, President

Warren Havens, an Individual
[\[Filed electronically. Signature on file.\]](#)
Warren Havens

Each Petitioner:

2509 Stuart Street, Berkeley, CA 94705
Phone: 510-841-2220. Fax: 510-740-3412

Unless inaccurate practice is intended and invited, these are not “*Havens*” individually or in the aggregate. Each undersigned entity is a separate legal entity, with different ownership, financial, asset and other elements, shown in these entities various licensing disclosures. In addition, Skybridge is a fully nonprofit corporation under IRC §501(c)(3) no part of whose assets may be used or distributed for the benefit of any private individual or for-profit entity, including the other SkyTel entities. Skybridge is not permitted under law to provide any benefit to said other entities and is not their “affiliate” under FCC and nonprofit law. *As previously stated in various FCC proceedings, each SkyTel entity objects to the FCC and others, characterizing these entities as “Havens.”* In FCC formal proceedings, unless good cause is asserted, the parties (and FCC staff) should respect elements of law outside FCC jurisdiction. Legal entities’ character, differences, names, etc. are under State law, and in the case of a most nonprofits like Skybridge, also under federal IRC-IRS law.

Certificate of Service and Notification

I, Warren Havens, certify that on this 15th day of March 2012, caused to be served by placing into the USPS mail system with first-class postage affixed, unless otherwise noted, a copy of the foregoing pleading (reply) to the following:⁵

A copy will also be emailed to Mr. Olcott, and a voice notification given, each on the morning of March 13, 2012.

Progeny LMS, LLC
2058 Crossing Gate Way
Vienna, VA 22181
ATTN Carson Agnew

Squire Sanders (US) LLP
Bruce A Olcott , Esq
1200 19th Street, N.W.
Washington, DC 20036

[Filed electronically. Signature on file.]

Warren Havens

⁵ The mailed copies being placed into a USPS drop-box today may not be processed by the USPS until the next business day.